COUNCIL AGENDA: 01-12-10
ITEM: 2.7

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: John Stufflebean

SUBJECT: SEE BELOW

DATE: 01-05-10

Approved

Date 1/6/10

COUNCIL DISTRICT: Citywide

SUBJECT: APPLICATION FOR STATE GRANT - BIOMETHANE FUEL PRODUCTION FACILITY AT THE SAN JOSÉ / SANTA CLARA WATER POLLUTION CONTROL PLANT

RECOMMENDATION

Adopt a resolution authorizing the City Manager to submit a grant proposal to the California Energy Commission, Alternative and Renewable Fuel and Vehicle Technology Program, for up to $10,000,000 for the development of a biomethane transportation fuel production facility on Water Pollution Control Plant lands, subject to the concurrence of the Treatment Plant Advisory Committee.

OUTCOME

Approval of this recommendation, subject to the concurrence of the Treatment Plant Advisory Committee, will authorize the City Manager to submit a grant application by the January 25, 2010 deadline, requesting funding to support development of renewable energy infrastructure. Development of a biomethane transportation fuel production facility and fueling infrastructure on Water Pollution Control Plant land would help the City to meet its Green Vision goals for reducing waste, generating renewable energy, converting fleet to use alternative fuels, and creating local green jobs.

BACKGROUND

The California Energy Commission (CEC) has established Alternative and Renewable Fuel and Vehicle Technology Program to provide grant funding to projects that develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the State's climate change policies. Projects eligible for funding include design, construction, and

operation of biomethane production facilities and projects that develop infrastructure to store, distribute and dispense renewable transportation fuels. The intent of this grant solicitation is to encourage the development of a new industry in California to produce renewable transportation fuels, expand the state's network for distribution of renewable fuels and develop commercialization of renewable fuel technology for medium and heavy duty vehicles in order to reduce greenhouse gas, reduce petroleum fuel demand, stimulate economic development, and reduce environmental impacts associated of the State's major waste sources. The grant requires match funding of 50% of total project costs, which can be in-kind services and assets. The application deadline is January 25, 2010.

ANALYSIS

Through the San José/ Santa Clara Water Pollution Control Plant (Plant) Master Plan processes, staff has determined that increases in energy production with solar and other renewable technologies will help the Plant achieve the goal of becoming energy self sufficient. Planning for several-energy related projects at the Plant is already underway including digester upgrades, a grease receiving station, optimization of the aeration process to reduce energy usage, advanced automation of the treatment processes, and installation of fuel cells. A biomethane plant located at the Plant could utilize regional waste feedstocks from the Bay Area such as food and yard waste to create methane gas, which can be converted to electrical power for vehicle use (charging stations) or vehicle fuel. Developing waste to energy technology infrastructure at the Plant which generates biomethane was included in the Council approved 2009 Green Vision Work Plan and identified as a priority project in the City Manager's Office American Recovery & Reinvestment Act informational memorandum to Council dated December 4, 2008.

Currently, large scale facilities that use digestion for food, yard trimmings, and fats, oils, and grease, to create biomethane are primarily located in Europe and Asia due to their higher population densities and conventional disposal costs. However, extensive research by Los Angeles City and County, San Francisco, Alameda County and other California local government agencies indicates that these facilities may now be technically and economic feasible in California. .

A local biomethane facility at the Plant could provide the following benefits to the City and Plant Tributary Agencies:

- Divert hard-to-recycle waste from landfills
- Generate renewable energy
- Generate revenue
- Reduce carbon impacts of organic wastes disposal
- Provide regional solutions for organic waste recycling; currently there are very limited recycling options for this waste in the Bay Area.
- Leverage private sector and State government resources for the development of facility
- Drive leadership as a center for technology innovation

Biomethane is a sustainable and renewable resource which can be used to produce both electricity and vehicle fuel. A biomethane production facility at the Plant would have other synergies with the Plant including the use of recycled water, potential for return of wastewater into the treatment system, potential use of Plant rail spur for soil amendments and fertilizers and potential use of surplus Plant infrastructure. In addition, fueling infrastructure could be utilized Plant and other City and/or private vehicles. Compressed biomethane is nearly identical to compressed natural gas (CNG). Biomethane can be used to fuel heavy-, medium-, and light-duty CNG vehicles, providing an inexpensive, domestic, and environmentally sustainable altemative to petroleum.

Providers of waste to energy facilities are looking for showcase sites in North America. Since the release of the City's Renewable Energy Request for Information in 2007, technology providers have continuously approached the City with energy infrastructure proposals. To accommodate the technology vendors wanting to partner with the City on this grant, and Request for Interest (RFI) solicitation was issued in early January 2010 to gauge the level of private sector interest and obtain information from firms interest in participating in development of a biomethane transportation fuel production facility and fueling infrastructure on Water Pollution Control Plant. Information received from the firms that respond to the RFI will be used to prepare the proposed City CEC grant submittal. If the City is selected for a grant award, staff proposes to conduct a competitive process among the firms that respond to the RFI and to bring forward a recommendation for environmental clearance, grant acceptance, and vendor selection for Council and Treatment Plant Advisory Committee consideration. Staff is familiar with technology vendors likely to respond to the RFI, and based on the information received to date, is confident of receiving a viable proposal.

This grant solicitation has a 50% matching funds requirement. The value of existing Plant infrastructure, such as digesters which are no longer needed for Plant operations and well as Plant lands used for the biomethane transportation fuel production facility and fueling infrastructure may be eligible for consideration toward the matching fund requirement. It is anticipated that significant private sector capital will also required however, as the initial estimates of a biomethane transportation fuel production facility and fueling infrastructure on Plant lands is $26 million. Private firms have access to additional financing incentives, and involvement of a private firm would allow the City to leverage a variety of capital development resources.

EVALUATION AND FOLLOW-UP

This memorandum is scheduled to be considered by the Treatment Plant Advisory Committee on January 14, 2010. If the City is selected for a grant award, staff will bring forward a recommendation for environmental clearance, grant acceptance and vendor selection for Council and Treatment Plant Advisory Committee consideration. .

PUBLIC OUTREACH/INTEREST

This project does not meet any of the below Criteria, but this memorandum will be posted on the City's website for the January 12, 2010 Council agenda. This item is scheduled to be heard at the January 14, 2010, Treatment Plant Advisory Committee meeting.

- ☐ Criterion 1: Requires Council action on the use of public funds equal to $1 million or greater. (Required: Website Posting)
- ☐ Criterion 2: Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. (Required: E-mail and Website Posting)
- ☐ Criterion 3: Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified staff, Council or a Community group that requires special outreach. (Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)

COORDINATION

This memorandum was coordinated with the City Manager's Budget Office and the City Attorney.

CEQA

This application request is not a project. CEQA review will be completed prior to any project approval.

/s/
JOHN STUFFLEBEAN
Director, Environmental Services

For questions please contact Michele Young, Organics Program Manager, at 408-975-2519.

SUPPLEMENTAL COUNCIL AGENDA: 01-12-10
ITEMS: 2.7

SAN JOSÉ / SANTA CLARA WATER POLLUTION CONTROL PLANT

TREATMENT PLANT ADVISORY COMMITTEE

January 12, 2010

The Honorable Mayor and City Council
City of San Jose
200 East Santa Clara Street
San Jose, CA 95113

Dear Mayor Reed and City Council:

At its meeting of January 14, 2010, the Treatment Plant Advisory Committee (TPAC) reviewed the items concerning the Water Pollution Control Plant on the San Jose City Council agenda for January 12, 2010.

These items are listed below along with the TPAC recommendation for San Jose City Council action.

1. Adopt a resolution authorizing the City Manager to submit a grant proposal to the California Energy Commission, Alternative and Renewable Fuel and Vehicle Technology Program, for up to $10,000,000 for the development of a biomethane transportation fuel production facility on Water Pollution Control Plant lands, subject to the concurrence of the Treatment Plant Advisory Committee.

Sincerely,

Chuck Reed

Chuck Reed, Chairperson
Treatment Plant Advisory Committee